

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Please amend claims 42, 47-49, 51, and 57 and add new claims 114-116. Please cancel claims 43, 52-56, and 113.

Listing of Claims

1 - 41. (Cancelled)

42. (Currently Amended) An isolated recombinant human ANT1-adenine nucleotide translocator 1 (ANT1) polypeptide having at least 95% identity to comprising the amino acid sequence set forth in SEQ ID NO:31, wherein the recombinant human ANT1 polypeptide is capable of binding an ANT ligand and is produced by a method comprising culturing a host cell comprising a recombinant expression construct comprising at least one regulated promoter operably linked to a nucleic acid encoding the ANT1 adenine nucleotide translocator polypeptide.

43 - 46. (Cancelled)

47. (Currently Amended) An isolated ~~human ANT1-adenine nucleotide translocator 1 (ANT1) fusion protein comprising an ANT1 adenine translocator polypeptide fused to at least one additional polypeptide sequence, wherein said ANT1 adenine translocator polypeptide has at least 95% amino acid sequence identity to the sequence of a human ANT1 polypeptide as set forth in SEQ ID NO:31, and wherein the ANT1 fusion protein is capable of binding an ANT ligand.~~

48. (Currently Amended) The fusion protein of either claim 47 or claim 114 wherein said one additional polypeptide sequence is an enzyme sequence or a variant or fragment thereof.

49. (Currently Amended) The fusion protein of either claim 47 or claim 114 wherein said fusion protein localizes to membranes.

50. (Original) The fusion protein of claim 49 wherein said membranes are mitochondrial membranes.

51. (Currently Amended) An isolated ~~human ANT1~~ adenine nucleotide translocator 1 (ANT1) fusion protein comprising an ANT1 ~~adenine translocator~~ polypeptide fused to at least one additional polypeptide sequence cleavable by a protease, said ANT1 ~~adenine nucleotide translocator~~ polypeptide being separable from the fusion protein by cleavage with the protease, wherein said ANT1 ~~adenine translocator~~ polypeptide has at least 95% amino acid sequence identity to the sequence of a human ANT1 polypeptide set forth in SEQ ID NO:31, and wherein the ANT1 fusion protein is capable of binding an ANT ligand.

52 -56. (Cancelled)

57. (Currently Amended) The fusion protein of either claim 47 or claim ~~52~~ 115 wherein the additional polypeptide sequence is a polypeptide having affinity for a ligand.

58 - 113. (Cancelled)

114. (New) An isolated recombinant human adenine nucleotide translocator fusion protein comprising an adenine nucleotide translocator (ANT) polypeptide fused to at least one additional polypeptide sequence, wherein the ANT polypeptide comprises an amino acid sequence of a human ANT1 polypeptide as set forth in SEQ ID NO:31.

115. (New) An isolated human adenine nucleotide translocator fusion protein comprising an adenine nucleotide translocator (ANT) polypeptide fused to at least one additional polypeptide sequence cleavable by a protease that separates the ANT polypeptide from the remainder of the fusion protein, wherein the ANT polypeptide comprises the amino acid sequence of a human ANT1 sequence as set forth in SEQ ID NO:31.

116. (New) An isolated polypeptide according to claim 42 in which one amino acid residue is substituted.